

Work Order ID 162779

Monday, June 12, 2017 1:35:57 PM

Ship 28 June

162779 S/O 131240

Page 1

Item ID: 647.3702

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/23/2017 Req'd Qty: 1.00

1

Customer:

Reference:

DAS

21

9-89

Approvals:

Process Plan:

Date: JUN 12 2017

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

647.3700

NC3

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP 647.3702

DAS
27
9-89

JUN 27 2017

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

DAS
6
9-89

JUN 15 2017

DAS
28
9-89

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.03

Quality Control

DAS
27
9-89

JUN 26 2017

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By _____		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

Work Order ID 162779

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162779

Page 2

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Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

Identify as per dwg & Stock Location: _____

0.00

130

Packaging

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP 647.3702

Location: fg 102

DAS

27

9-89

JUN 27 2017

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.10

Quality Control

DAS

21

9-89

JUN 27 2017

JUN 27 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Monday, June 12, 2017 1:36:04 PM

Page 1

Work Order ID: 162779

162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP REV:A 12.10.26 NEW ISSUE DD VERF:JLM
REV:B 15.01.26 as per ecr 14-214 DD VERF:JLM
PER REV NC3 15.03.18 JLM VERIFIED BY:DD

IPP
IPP REV:C AS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.3903 *647 3903* Deflector Assembly DAS 27 9-89		Manufactured	No			110	Each	1.0000	1	1	DAS 6 9-89	JUN 15 2017	DAS 28 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				cck016				1					
				159434				1	3/10/2018	1			
647.3801 *647 3801* 412 Upper Cutter Assembly		Manufactured	No			110	Each	1.0000	1	1	DAS 6 9-89	JUN 15 2017	DAS 28 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CCK028				1					
				158199				1	3/10/2018	1			
647.3804 *647 3804* Lower Cutter Assembly High		Manufactured	No			110	Each	0.0000	1	1	DAS 6 9-89	161341 JUN 15 2017	DAS 28 9-89
647.4410 *647 4410* Rail		Manufactured	No			110	Each	15.0000	1	1	DAS 6 9-89	JUN 15 2017	DAS 28 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CCK081				15					
				155358				15					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

Picklist Print

Page 2

Monday, June 12, 2017 1:36:04 PM

Work Order ID: 162779

162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

647.4010 Manufactured No

110 Each 21.0000 1 1

647 4010

Wiper Deflector RH

**

DAS 6 JUN 15 2017 DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

cck060

21

120740

1

158472

20

647.4011 Manufactured No

110 Each 9.0000 1 1

647 4011

Wiper Deflector LH

**

DAS 6 JUN 15 2017 DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

CCK051

9

155433

9

647.4110 Manufactured No

110 Each 3.0000 1 1

647 4110

Doubler

**

DAS 6 JUN 15 2017 DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

CCK080

3

154910

3

647.4111 Manufactured No

110 Each 0.0000 1 1

647 4111

Doubler

**

DAS 6 JUN 20 2017 DAS 28 9-89

647.4112

647.4112 Manufactured No

110 Each 5.0000 1 1

647 4112

Clip

**

DAS 6 JUN 15 2017 DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

CCK112

5

154921

5

Monday, June 12, 2017 1:36:04 PM

Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

Picklist Print

Monday, June 12, 2017 1:36:04 PM

Work Order ID: 162779

162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

647.4113
647 4113
Clip

Manufactured No

110 Each

6.0000

1 1

**

DAS

6

JUN 15 2017 9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK112

6

154922

6

647.4114
647 4114
Shim

Manufactured No

110 Each

6.0000

2 2

**

DAS

6

JUN 15 2017 9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK112

6

120746

1

158414

5

647.4115
647 4115
Shim

Manufactured No

110 Each

6.0000

2 2

**

DAS

6

9-89

JUN 15 2017 9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK112

6

154293

1

158416

5

647.4116
647 4116
Shim

Manufactured No

110 Each

14.0000

1 1

**

DAS

6

JUN 15 2017 9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK112

14

121064

2

158848

12

DAS
27
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval																																																							
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																							
Root Cause		FAULT CATEGORY																																																													
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____	
Misidentified ☐	Past Due ☐																																																														

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647 3702

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Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

647.4210 Manufactured No

110 Each

4.0000

1 1

647 4210

Bracket LH
DAS 27 9-89

Location

Loc Qty

Loc Code

CCK112

4

155375

4

110 Each

4.0000

**

JUN 15 2017

DAS 6 28 9-89

647.4211 Manufactured No

110 Each

4.0000

1 1

647 4211

Bracket RH
DAS 27 9-89

Location

Loc Qty

Loc Code

CCK112

4

155386

4

110 Each

3.0000

**

JUN 15 2017

DAS 6 28 9-89

647.4311 Manufactured No

110 Each

3.0000

1 1

647 4311

RH Lower Strut
DAS 27 9-89

Location

Loc Qty

Loc Code

CCK073

3

154294

3

110 Each

13.0000

**

JUN 15 2017

DAS 6 28 9-89

647.4310 Manufactured No

110 Each

13.0000

1 1

647 4310

LH Lower Strut
DAS 27 9-89

Location

Loc Qty

Loc Code

CCK072

13

158229

13

110 Each

5.0000

**

JUN 15 2017

DAS 6 28 9-89

647.4312 Manufactured No

110 Each

5.0000

1 1

647 4312

LH Upper Strut
DAS 27 9-89

Location

Loc Qty

Loc Code

CCK074

5

154503

5

DAS 6 28 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

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162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

647.4313 Manufactured No

110 Each 13.0000 1 1

647 4313

RH Upper Strut

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK075

13

154502

5

158436

8

**

JUN 15 2017

DAS
28
DAS
6
9-89

NAS1149FN832P

Purchased No

110 Each 1,755.000 34 34

NAS1149FN832P

Washer

Location

Loc Qty

Loc Code

GA

358

M135058

208

M136182

40

M136866

110

ST263

1397

M137412

1397

**

JUN 15 2017

DAS
6
9-89

DAS
28
9-89

NAS1149F0332P

Purchased No

110 Each 3,406.000 157 157

NAS1149F0332P

Washer

Location

Loc Qty

Loc Code

GA

275

m133709

275

ST260a

2000

m137710

2000

ST262

1131

m137412

1131

**

JUN 15 2017

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

157

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Page 6

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Work Order ID: 162779

162779

Parent Item: 647.3702

647.3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-07

Purchased

No

110

Each

93.0000

12

12

MS27039-1-07

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

68

m137736

68

ST281

25

m137736

25

MS27039-1-10

Purchased

No

110

Each

635.0000

42

42

MS27039-1-10

SCREW

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

15

m129541

15

over006

450

m137597

300

m137736

150

ST280

170

m137164

170

MS27039-08-08

Purchased

No

110

Each

151.0000

16

16

MS27039-08-08

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST278

151

m130325

151

**

DAS
6
9-89

JUN 15 2017

DAS
28
9-89

**

DAS
6
9-89

JUN 15 2017

DAS
28
9-89

**

DAS
6
9-89

JUN 15 2017

DAS
28
9-89

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Shop Packet Print

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : ☐							

Picklist Print

Monday, June 12, 2017 1:36:04 PM

Work Order ID: 162779

162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-09

Purchased

No

110

Each

223.0000

14

14

MS27039-1-09

Screw

**

JUN 15 2017

DAS

28

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

FP001

17

18057

17

GA

18

124859

18

ST280

188

m137544

188

MS27039-08-11

Purchased

No

110

Each

272.0000

2

2

MS27039-08-11

SCREW

**

JUN 15 2017

DAS

28

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

ST278

272

m135864

22

m137412

250

MS24694-S49

Purchased

No

110

Each

164.0000

1

1

MS24694-S49

Screw

**

JUN 15 2017

DAS

28

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

over006

100

m129499

100

ST284

64

m129702

64

MS24694-C53

Purchased

No

110

Each

38.0000

8

8

MS24694-C53

Screw

**

JUN 15 2017

DAS

28

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

ST285

38

m136444

38

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER :			

Picklist Print

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Work Order ID: 162779

162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

601.3073 Purchased No 110 Each 0.0000

601 3073 *Will ship at a later date 17-06-26*

Connector p/n 082-4440

AN3-4A *27 9-89*

AN3-4A

Bolt

DAS 27 9-89

AN3-11A Purchased No

AN3-11A

Bolt

Location	Loc Qty	Loc Code
ST350	305	
m137478	305	
	110	Each
	220.0000	

*** 1 1 0.0000 163189 DAS 28 9-89*

*** 3 3 305.0000 DAS 6 9-89 JUN 15 2017 DAS 28 9-89*

Location	Loc Qty	Loc Code
over003	100	
m136192	100	
ST349	120	
153855	120	
	110	Each
	22.0000	

*** 8 8 220.0000 DAS 6 9-89 JUN 15 2017 DAS 28 9-89*

*** 2 2 22.0000 DAS 6 9-89 JUN 15 2017 DAS 28 9-89*

AN3C10A Purchased No

AN3C10A

Bolt

Location	Loc Qty	Loc Code
ST349	22	
m136983	2	
m137321	20	
	110	Each
	83.0000	

*** 12 12 83.0000 DAS 6 9-89 JUN 15 2017 DAS 28 9-89*

*** 12 12 83.0000 DAS 6 9-89 JUN 15 2017 DAS 28 9-89*

CR3212-4-2 Purchased No

CR3212-4-2

Cherry Rivet

Location	Loc Qty	Loc Code
ST320	83	
m137164	83	
	110	Each
	83.0000	

*** 12 12 83.0000 DAS 6 9-89 JUN 15 2017 DAS 28 9-89*

DAS 27 9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Picklist Print

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Work Order ID: 162779

162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-3 Purchased No

CR3212-4-3

Cherry Rivet

110 Each 241.0000

17 17

**

DAS
6
9-89

DAS
28
9-89

JUN 15 2017

DAS
27
9-89

Location Loc Qty Loc Code

CCK003 200

m136741 200

ST320 41

m135408 41

CR3212-4-4 CR3212-4-04 Purchased No

CR3212-4-4

CHERRY RIVET

110 Each 0.0000

4 4

**

DAS
6
9-89

DAS
28
9-89

JUN 15 2017

DAS
27
9-89

Location Loc Qty Loc Code

ST321 229

123785 29

m137391 100

m137736 100

CCR264SS-3-03 Purchased No

CCR264SS-3-03

Cherry Rivet

110 Each 141.0000

16 16

**

DAS
6
9-89

DAS
28
9-89

JUN 15 2017

DAS
27
9-89

Location Loc Qty Loc Code

FP001 10

m137164 10

LG001 13

m134023 13

ST321 118

m137164 118

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

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Work Order ID: 162779

162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

CR3213-4-2

Purchased

No

110

Each

268.0000

13

13

CR3213-4-2

Cherry Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

200

m137710

100

m137621

100

ST320

68

m137412

68

110

Each

246.0000

32

32

CR3213-4-3

Purchased

No

CR3213-4-3

Rivet, Cherry

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

92

m136042

92

ST319

154

m136851

154

110

Each

408.0000

19

19

CR3213-4-4

Purchased

No

CR3213-4-4

Rivet, Cherry

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

300

m137391

200

m137736

100

ST319

108

m136301

108

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 162779

162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

CR3213-4-5 Purchased No

110 Each 202.0000 42 42

CR3213-4-5

Rivet

**

DAS
6
9-89

DAS
28
9-89

JUN 15 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

200

M137459

200

ST319

2

M137361

2

CR3213-4-8 Purchased No

110 Each 91.0000 4 4

CR3213-4-8

Rivet

**

DAS
6
9-89

DAS
28
9-89

JUN 15 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

ST319

91

m136983

91

MS21042-3 Purchased No

110 Each 0.0000 79 79

MS21042-3

Nut

**

DAS
6
9-89
137 495

DAS
28
9-89

JUN 15 2017

MS21042-08 Purchased No

110 Each 0.0000 18 18

MS21042-08

USE MS21042L08

**

DAS
6
9-89
137 391

DAS
28
9-89

JUN 15 2017

MS21047L06 Purchased No

110 Each 39.0000 6 6

MS21047L 06

Nut Plate

**

DAS
6
9-89

DAS
28
9-89

JUN 15 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

ST301

39

m137166

39

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Monday, June 12, 2017 1:36:05 PM

Work Order ID: 162779

162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

MS21047L08

Purchased No

110 Each

31.0000

6 6

MS210471 08

Nut Plate

DAS
27
9-89

Location

Loc Qty

Loc Code

ST301

31

m136406

6

m137615

25

MS21047-3

Purchased No

110 Each

261.0000

4 4

MS21047-3

Nut Plate

DAS
27
9-89

Location

Loc Qty

Loc Code

ST301

261

m137075

11

m137459

150

m137710

100

MS21071L3

Purchased No

110 Each

76.0000

4 4

MS210711 3

ANCHOR NUT

DAS
27
9-89

Location

Loc Qty

Loc Code

S299

50

m137680

50

ST299

26

125654

26

601.3083

Manufactured No

110 Each

4.0000

1 1

601 3083

Adhesive Rubber Seal

DAS
27
9-89

Location

Loc Qty

Loc Code

cck009

4

159136

4

DAS
6
9-89
JUN 15 2017
DAS
28
9-89

DAS
6
9-89
JUN 15 2017
DAS
28
9-89

DAS
6
9-89
JUN 15 2017
DAS
28
9-89

DAS
6
9-89
JUN 15 2017
DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

Picklist Print

Monday, June 12, 2017 1:36:05 PM

Work Order ID: 162779

162779

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 6/13/2017

Required Date: 6/23/2017

Start Qty: 1.00

Required Qty: 1.00

600.1012

Purchased

No

110

Each

28.0000

1

6001012

Sealant PR1425B2 (#654 sem)

**

DAS 27 9-89 JUN 15 2017

Location

Loc Qty

Loc Code

cck017

28

m136838

1

m137371

13

m137699

14

Purchased

No

110

Each

25.0000

1

601 2045

RTV (LOCTITE 598) McMaster p/n: 6641A41

**

DAS 27 9-89 JUN 15 2017

Location

Loc Qty

Loc Code

CCK096

7

m137538

7

CCK108A

10

m137538

10

GA

8

m134260

8

DAS 27 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐							
Misidentified ☐	Past Due ☐								



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

TRANSACTION CODES (TC):
A-ADD
R-REVISE
C-CREATE
D-DELETE

ENGINEERING CHANGE NOTICE NO.

04881

SHEET 1 OF 1

DWG NO. 647.3700

REV: N/C

PREPARED BY

J. BECKER

DATE: 02/26/15

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY:

ENGR

[Signature]

MFG.

[Signature]

QC

[Signature]

EFF.

NEXT ORDER

REASON: DELETED F/N 57, REVISED F/N 6.

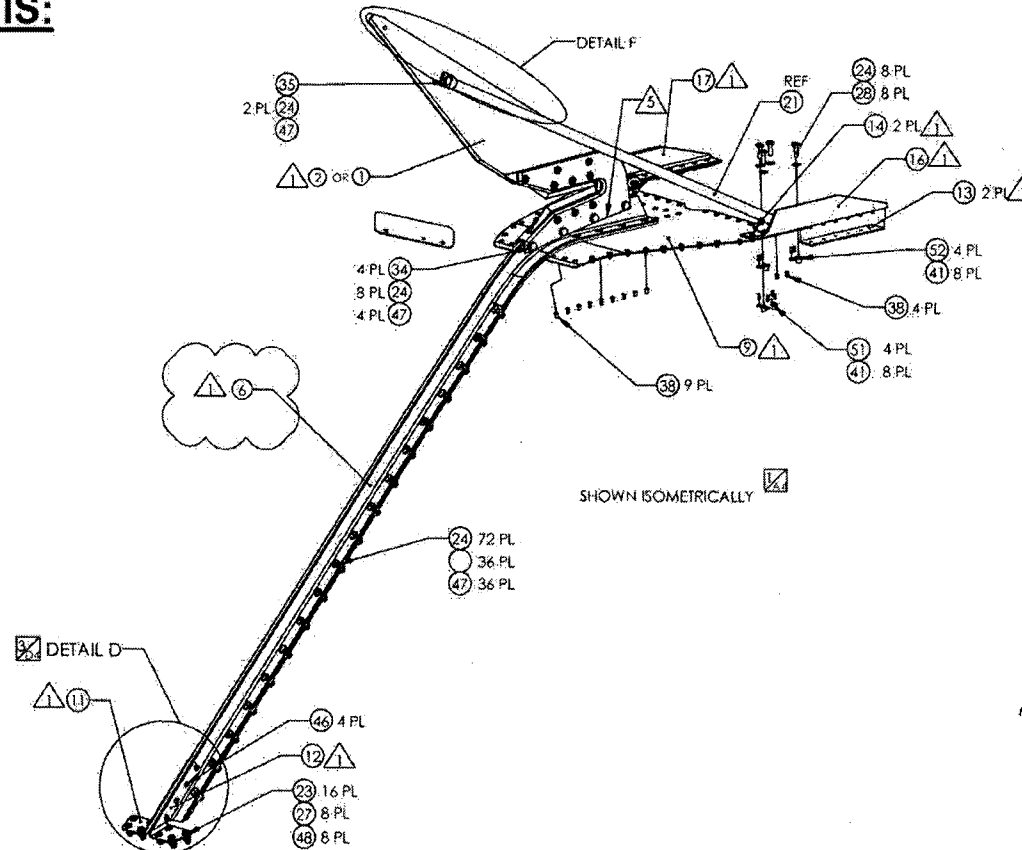
ECR:

N/A

ACTION ITEM:

1.

SHEET 1, ZONE C5 IS:



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 162779 M3
1206-18

57	D	647.3916	1	1	1	1	DEFLECTOR UPPER HALF				
6	R	647.3903	1	1	1	1	DEFLECTOR ASSEMBLY				
F/N	TC	PART NUMBER	3704	3703	3702	3701	DESCRIPTION			MATERIAL	SPECIFICATION
			QTY								
DOCUMENTS EFFECTED:							CHANGE CATEGORY			DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM							☐ MAJOR ☒ MINOR			☐ YES ☒ NO	

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



04845

SHEET 1 OF 1

DWG NO. 647.3700

REV:	N/C	PREPARED BY
------	-----	-------------

J. BECKER

DATE: 02/11/15

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY: ENGR

MFG

QC

EFF.	NEXT ORDER
------	------------

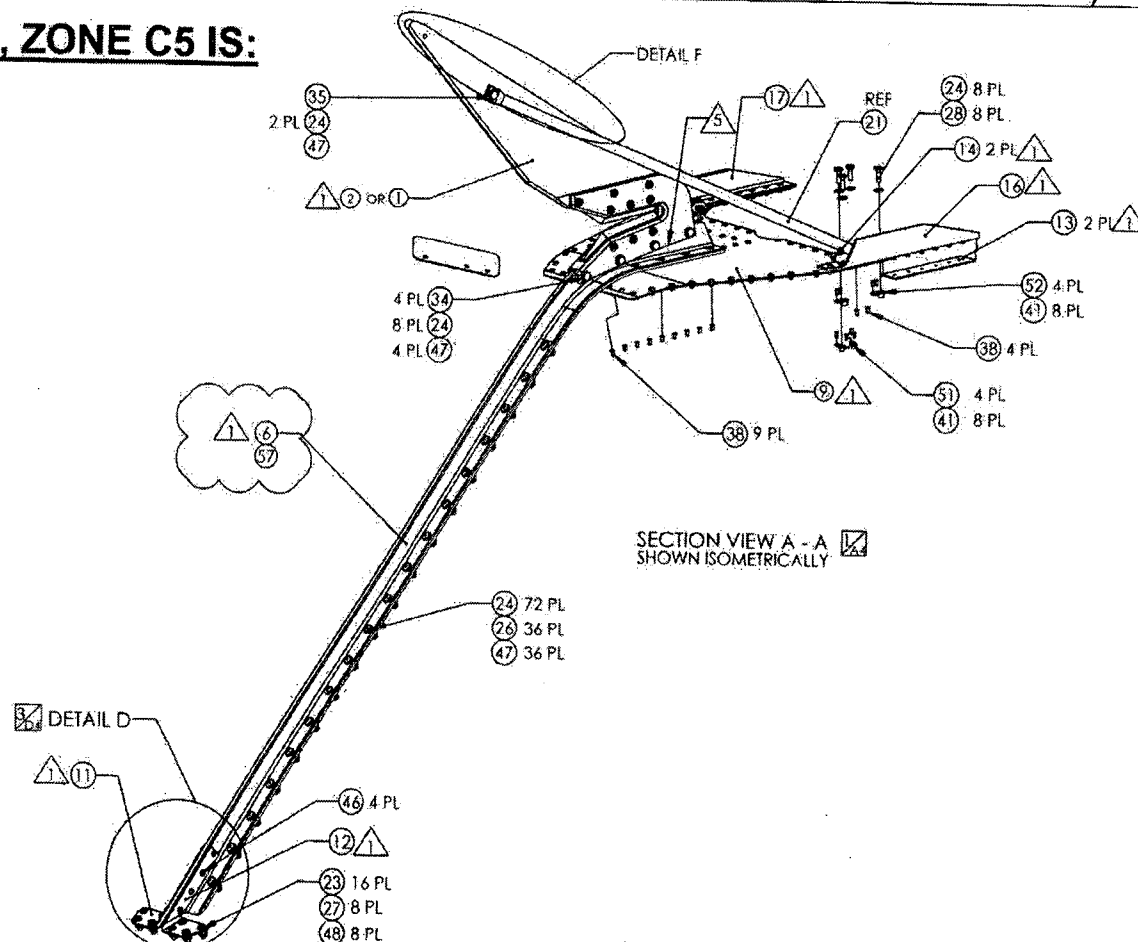
TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: ADDED F/N 57

ECR:

SHEET 1, ZONE C5 IS:

ACTION ITEM:
1.



57	A	647.3916	1	1	1	1	DEFLECTOR UPPER HALF				
F/N	TC	PART NUMBER	3704	3703	3702	3701	DESCRIPTION			MATERIAL	SPECIFICATION
			QTY								
DOCUMENTS EFFECTED:							☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM			CHANGE CATEGORY	DER REVIEW REQUIRED
							☐ MAJOR ☒ MINOR			☐ YES ☒ NO	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐				Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐				Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐				Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐											
		OTHER : ☐																							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

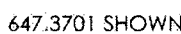
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

6 VENDOR: MCMASTER-CARR
VENDOR P/N: 86715K27
60A DUROMETER

01728, 04845, 04881

[illegible][illegible]

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

[illegible]

TELEPHONE (DATE) (MO-DA-YR) CRAWFORD 1. J. MORTON 2. BAEXER 3. BAEXER 4. BAEXER 5. BAEXER 6. BAEXER 7. BAEXER 8. BAEXER 9. BAEXER 10. BAEXER 11. BAEXER 12. BAEXER 13. BAEXER 14. BAEXER 15. BAEXER 16. BAEXER 17. BAEXER 18. BAEXER 19. BAEXER 20. BAEXER 21. BAEXER 22. BAEXER 23. BAEXER 24. BAEXER 25. BAEXER 26. BAEXER 27. BAEXER 28. BAEXER 29. BAEXER 30. BAEXER 31. BAEXER 32. BAEXER 33. BAEXER 34. BAEXER 35. BAEXER 36. BAEXER 37. BAEXER 38. BAEXER 39. BAEXER 40. BAEXER 41. BAEXER 42. BAEXER 43. BAEXER 44. BAEXER 45. BAEXER 46. BAEXER 47. BAEXER 48. BAEXER 49. BAEXER 50. BAEXER 51. BAEXER 52. BAEXER 53. BAEXER 54. BAEXER 55. BAEXER 56. BAEXER 57. BAEXER 58. BAEXER 59. BAEXER 60. BAEXER 61. BAEXER 62. BAEXER 63. BAEXER 64. BAEXER 65. BAEXER 66. BAEXER 67. BAEXER 68. BAEXER 69. BAEXER 70. BAEXER 71. BAEXER 72. BAEXER 73. BAEXER 74. BAEXER 75. BAEXER 76. BAEXER 77. BAEXER 78. BAEXER 79. BAEXER 80. BAEXER 81. BAEXER 82. BAEXER 83. BAEXER 84. BAEXER 85. BAEXER 86. BAEXER 87. BAEXER 88. BAEXER 89. BAEXER 90. BAEXER 91. BAEXER 92. BAEXER 93. BAEXER 94. BAEXER 95. BAEXER 96. BAEXER 97. BAEXER 98. BAEXER 99. BAEXER 100. BAEXER	APICAL INDUSTRIES 2408 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300 412 CABLE CUTTERS KIT TEL. C. CODE NO. 1990. NO. 647.3700 SCALE: NONE SHEET 2 OF 2
---	---

DQA: _____ Date: _____



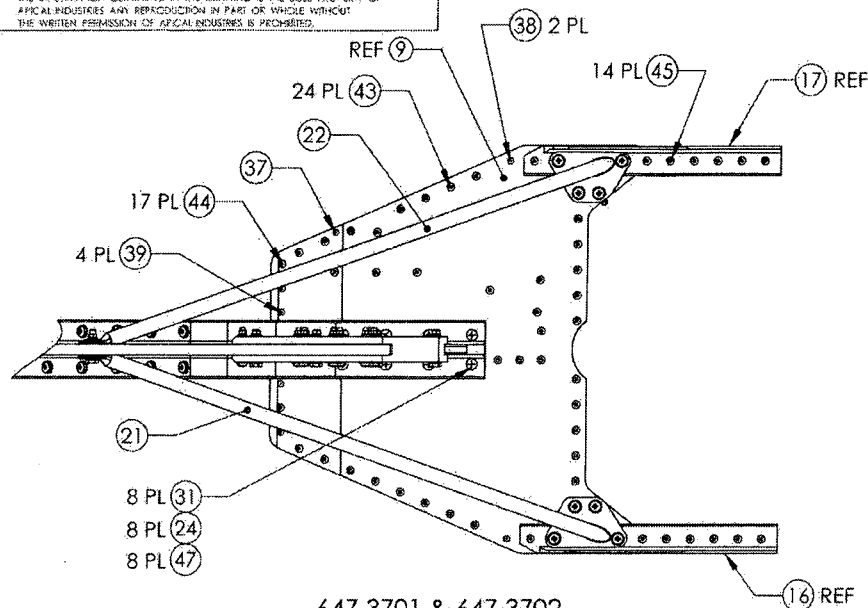
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

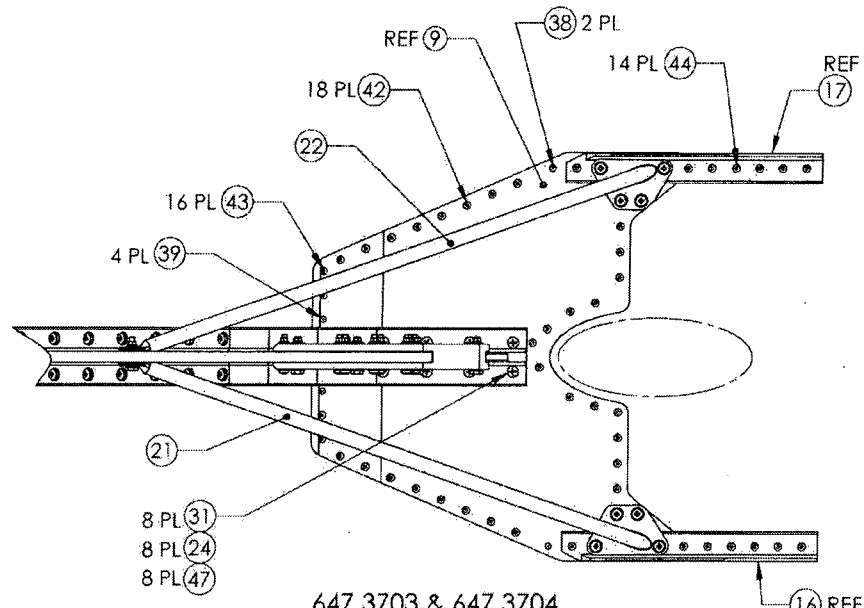
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

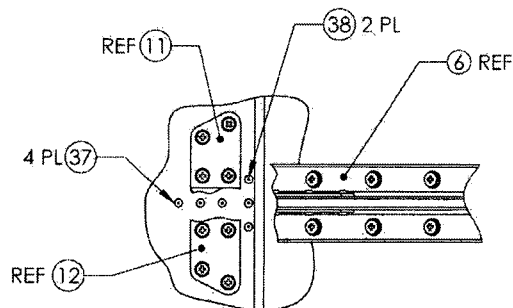
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647.3701 & 647.3702
UPPER CUTTER ASSEMBLY
TOP VIEW



647.3703 & 647.3704
UPPER CUTTER ASSEMBLY
TOP VIEW



DETAIL D
TOP VIEW
BROKEN OUT FOR CLARITY

ORIGINAL DATE AND CHG. NO. DESIGNER J. JACKSON DRAWING APPROVAL F. BRADY CHECKED BY		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DIMENSIONS AND TOLERANCES DIMENSIONS ARE IN INCHES FRACTIONS ARE 16, 32, 64, 128 DECIMALS ARE 0.005, 0.010, 0.015, 0.020, 0.030, 0.040, 0.050, 0.060, 0.070, 0.080, 0.090, 0.100, 0.125, 0.150, 0.175, 0.200, 0.250, 0.300, 0.375, 0.500, 0.625, 0.750, 0.875, 1.000, 1.250, 1.500, 1.750, 2.000, 2.500, 3.000, 3.500, 4.000, 4.500, 5.000, 5.500, 6.000, 6.500, 7.000, 7.500, 8.000, 8.500, 9.000, 9.500, 10.000		412 CABLE CUTTERS KIT	
REV	8	CAGE CODE 071426	DWG. NO. 647.3700 N/C. SCALE 1:1000 SHEET 3 OF 5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

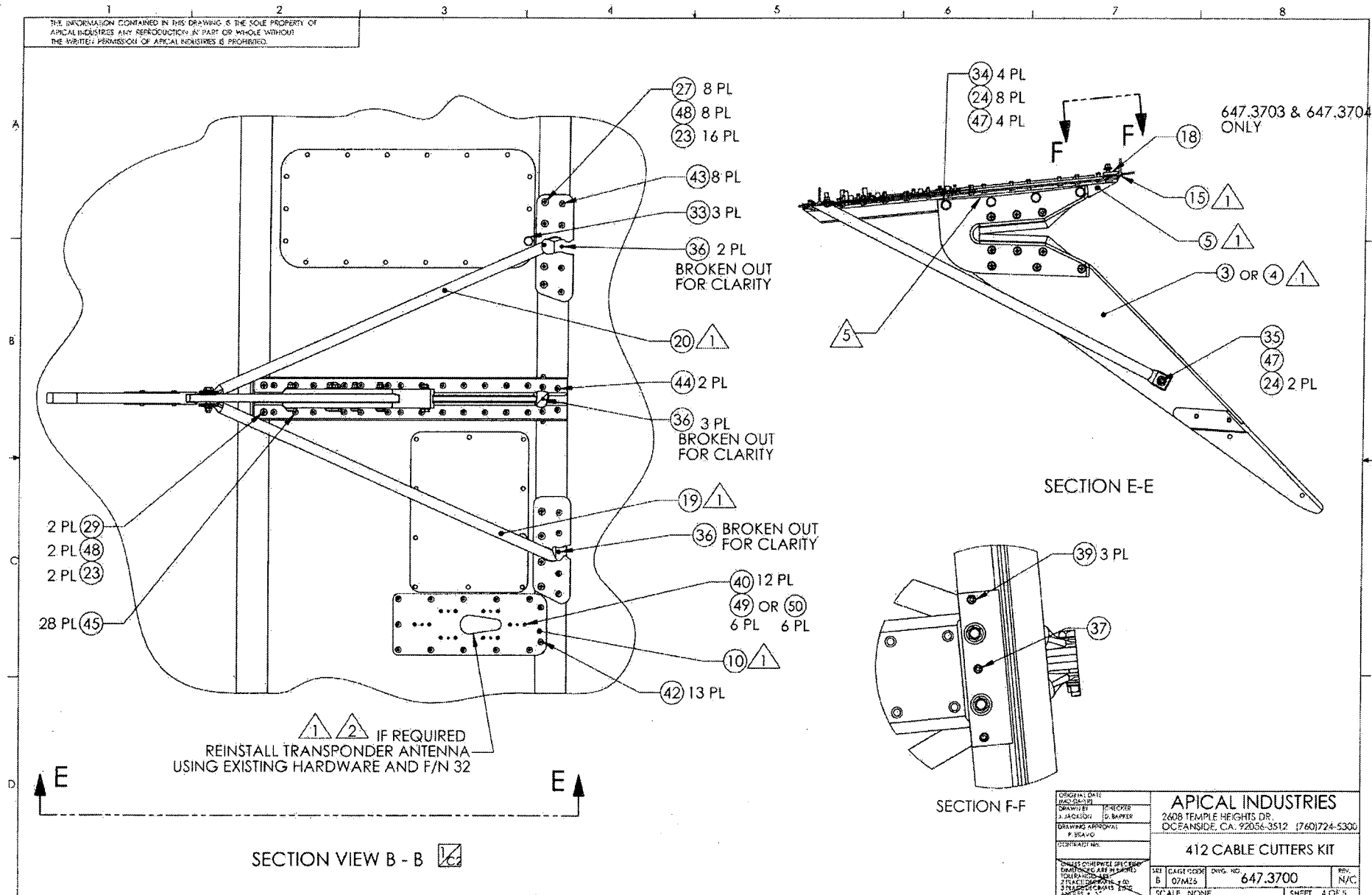
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified	☐	Past Due	☐				

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ORIGINAL DATE		APICAL INDUSTRIES	
DRAWN BY		2608 TEMPLE HEIGHTS DR.	
J. JACKSON		OCEANSIDE, CA 92056-3512 (760)724-5300	
DRAWING APPROVAL		412 CABLE CUTTERS KIT	
P. BRAVO		REV. N/A	
CONTRACT NO.		647.3700	
UNLESS OTHERWISE SPECIFIED		SCALE: NONE	
DIMENSIONS ARE IN INCHES		SHEET 4 OF 5	
TOLERANCES ARE FRACTIONS			
FRACTIONS ARE TO BE SHOWN AS DECIMALS			
DECIMALS ARE TO BE SHOWN AS FRACTIONS			
FRACTIONS ARE TO BE SHOWN AS DECIMALS			
DECIMALS ARE TO BE SHOWN AS FRACTIONS			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : ☐						
Misidentified ☐	☐	Past Due ☐							

BROKEN OUT FOR CLARITY
RH SIDE ONLY

 LH (8)
 OR
 RH (7)

DETAIL C 
LH SHOWN, RH OPPOSITE
2 PL

28 3 PL
24 6 PL
47 3 PL

—(53) TRIM TO FIT

26 3 PL
24 6 PL
47 3 PL

②5 6 PL
②4 12 PL
④7 6 PL

[illegible]

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

REFERENCE ONLY

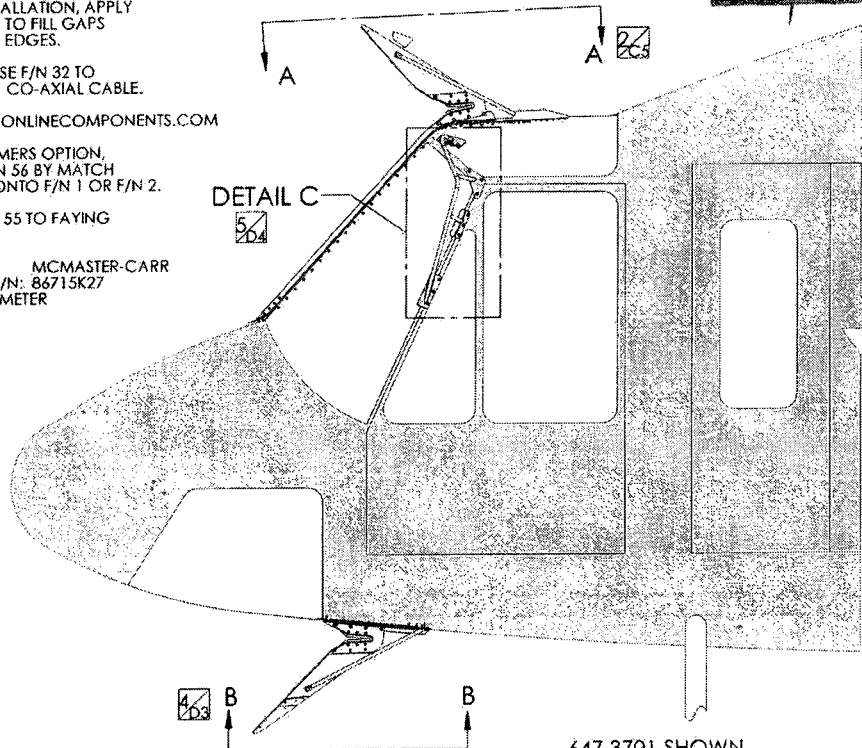
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UNINCORPORATED ECN(S)

01728, 04845, 04881

NOTES:

- 1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.
- 2 IF REQD. USE F/N 32 TO CONNECT CO-AXIAL CABLE.
- 3 VENDOR : ONLINECOMPONENTS.COM
- 4 AT CUSTOMERS OPTION, INSTALL F/N 56 BY MATCH DRILLING ONTO F/N 1 OR F/N 2.
- 5 APPLY F/N 55 TO FAYING SURFACES.
- 6 VENDOR : MCMMASTER-CARR
VENDOR P/N: 86715K27
60A DUROMETER



647.3701 SHOWN

REF	REF	REF	REF	56	647.3701	GPS MOUNT KIT		
A/R	A/R	A/R	A/R	55	601.2045	RTV	LOCITE 998	
A/R	A/R	A/R	A/R	54	601.1012	SEALANT	PR-125	
1	1	1	1	53	601.3083	ADHESIVE RUBBER SEAL	MP-R-3045	
4	4	4	4	52	601.2957	NUTPLATE	MS2107113	
4	4	4	4	51	600.0795	NUTPLATE	MS21047-3	
6	6	6	6	50	601.3066	NUTPLATE	MS21047-100	
6	6	6	6	49	601.3065	NUTPLATE	MS21047-106	
18	18	18	18	48	601.2973	LOCKNUT	MS21042-38	
79	79	79	79	47	601.2943	LOCKNUT	MS21042-3	
4	4	4	4	46	601.2364	CHERRY RIVET	CR3213-4-6	
28	28	42	42	45	601.1183	CHERRY RIVET	CR3215-4-5	
16	16	19	19	44	601.1915	CHERRY RIVET	CR3213-4-4	
24	24	32	32	43	601.0790	CHERRY RIVET	CR3213-4-3	
31	31	13	13	42	601.1039	CHERRY RIVET	CR3213-4-2	
3704	3703	3702	3701	FIND #	PART #	DESCRIPTION	MATL	SPEC.

16	16	16	16	41	601.2207	NUTPLATE RIVET	CCR2655-3-03	
12	12	12	12	40	601.2491	NUTPLATE RIVET	CCR2655-3-04	
7	7	4	4	39	601.1056	CHERRY RIVET	CR3212-4-4	
17	17	17	17	38	601.1065	CHERRY RIVET	CR3212-4-3	
5	5	6	6	37	601.1604	CHERRY RIVET	CR3212-4-2	
6	6	6	6	36	601.3082	CHERRY RIVET	CR3212-4-1	
2	2	2	2	35	601.1874	BOLT	AN3016A	
8	8	8	8	34	601.2826	BOLT	AN311A	
3	3	3	3	33	601.2823	BOLT	AN311A	
1	1	1	1	32	601.3073	CONNECTOR	DB2-44-0	
8	8	8	8	31	601.2419	SCREW	MS2484C53	
1	1	1	1	30	601.3070	SCREW	MS2484A-5-49	
2	2	2	2	29	601.2893	SCREW	MS2703P-06T1	
14	14	14	14	28	601.3069	SCREW	MS2703P-1-09	
16	16	16	16	27	601.2263	SCREW	MS2703P-0808	
42	42	42	42	26	601.1365	SCREW	MS2703P-1-10	
12	12	12	12	25	601.2198	SCREW	MS2703P-1-07	
157	157	157	157	24	601.1607	WASHER	HAS1149H1032P	
34	34	34	34	23	601.2764	WASHER	HAS1149H832P	
1	1	1	1	22	647.4313	RH UPPER STRUT		
1	1	1	1	21	647.4312	LH UPPER STRUT		
1	1	1	1	20	647.4310	LH LOWER STRUT		
1	1	1	1	19	647.4311	RH LOWER STRUT		
1	1	1	1	18	647.4212	PLATE		
1	1	1	1	17	647.4211	BRACKET RH		
1	1	1	1	16	647.4210	BRACKET LH		
1	1	1	1	15	647.4116	SHIM		
2	2	2	2	14	647.4115	SHIM		
2	2	2	2	13	647.4114	SHIM		
1	1	1	1	12	647.4113	CLIP		
1	1	1	1	11	647.4112	CLIP		
1	1	1	1	10	647.4111	DOUBLER		
1	1	1	1	9	647.4110	DOUBLER		
1	1	1	1	8	647.4011	WIPER DEFLECTOR LH		
1	1	1	1	7	647.4010	WIPER DEFLECTOR RH		
1	1	1	1	6	647.3915	DEFLECTOR		
1	1	1	1	5	647.4410	RAIL		
1	1	1	1	4	647.3804	LOWER CUTTER ASSY HIGH		
1	1	1	1	3	647.3803	LOWER CUTTER ASSY LOW		
1	1	1	1	2	647.3802	212 UPPER CUTTER ASSY		
1	1	1	1	1	647.3801	412 UPPER CUTTER ASSY		
647.3704	204	205	212			CABLE CUTTERS KIT HIGH		
647.3703	204	205	212			CABLE CUTTERS KIT LOW		
647.3702	412					CABLE CUTTERS KIT HIGH		
647.3701	412					CABLE CUTTERS KIT LOW		

QTY	DESCRIPTION	MATL	SPEC.
3704	3703	3702	3701
NEXT ASSY (S)			
DRAWN BY J. JACKSON CHECKED BY D. BARBER DATE 10/20/16 CONTRACT NO. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES			
APICAL INDUSTRIES		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300	
412 CABLE CUTTERS KIT		647.3700	
REF. CODE	QTY. REQD.	REV.	N/C
B	07/16		
SCALE: NONE		SHEET 1 OF 3	

Work Order ID 162779

Monday, June 12, 2017 1:35:57 PM

Ship 28 June

162779

Page 1

Item ID: 647.3702

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: 412 Cable Cutter System, High

Stop *NS2*

Start Date: 6/13/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/23/2017 Req'd Qty: 1.00

1

Customer:

Reference:

DAS

21

Approvals:

Process Plan:

3-50

Date: JUN 12 2017

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

647.3700

NC3

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP 647.3702

DAS

5

9-89

JUN 26 2017

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

DAS

6

9-89

JUN 15 2017

DAS

28

9-89

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.03

Quality Control

DAS

27

9-89

JUN 26 2017

United States Of America
Department of Transportation - Federal Aviation Administration
Supplemental Type Certificate

Number SR02289LA

This Certificate issued to

Apical Industries, Inc. dba Dart Aerospace
3030 Enterprise Court, Suite A
Vista, California 92081

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified herein meets the airworthiness requirements of Part 29 and CAR 7 of the Federal Aviation Regulations.*

Original Product Type Certificate Number:

Make:

Model:

* See attached FAA Approved Model List (AML)
Number SR02289LA for list of approved aircraft
models and applicable airworthiness regulations.

Description of Type Design Change: Installation of Apical Industries, Inc. Cable Cutters Kit in accordance with FAA approved Apical Industries, Inc. Master Document List MD412-101, Revision A, dated December 23, 2009, or later FAA approved revision.

Limitations and Conditions: This approval requires the inspections and overhaul schedules to be performed as mandated by Apical Industries, Inc.'s Instructions for Continued Airworthiness, ICA412-101, Revision N/C, dated January 5, 2010, or later FAA accepted revision.

This installation should not be incorporated in any aircraft unless it is determined that the interrelationship between this installation and any previously approved configuration will not introduce any adverse effect upon the airworthiness of the aircraft. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of this permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: September 29, 2009

Date received: August 7, 2014

Date of issuance: April 27, 2010

Date amended:

By direction of the Administrator



Haifa Haj-Eid
(Signature)

Haifa Haj-Eid
Supervisor, Technical and Administrative
Support Staff
Los Angeles Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.